

Combination clothes dryer and duct cleaning brush

U.S. Patent Application of:

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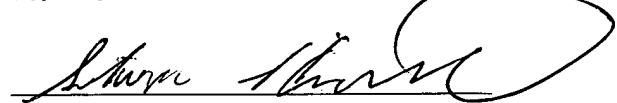
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STEPHEN HILLENBRAND

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A handwritten signature in dark ink, appearing to read "Stephen Hillenbrand", written over a horizontal line.

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**Title of the Invention**

**Combination Clothes Drier and Duct Cleaning Brush**

**Cross Reference to Related Applications**

**Not Applicable**

**Statement Regarding Federally Sponsored Research or Development**

**Not Applicable**

**Description of Attached Appendix**

**Not Applicable**

**Background of the Invention**

This invention relates generally to the field of cleaning brushes and more specifically to a combination clothes drier and duct cleaning brush.

Cleaning brushes of many kinds are well known. One type of brush construction involves twisting a pair of metal wires and, while the wire is being twisted, inserting a plurality of bristles radially at a ninety degree angle. The final construction allows for a somewhat flexible brush where the brush head can be inserted into non linear orifices. Although brushes of this type exist, there does not exist a single brush tool that can clean both the duct portion of a standard clothes drier as well as the lint storage portion of a standard clothes drier.

Additionally, there does not exist a cleaning brush that incorporates bristles of

polyester on one end of the cleaning brush and bristles of nylon on the opposite end of the cleaning brush.

#### **Brief Summary of the Invention**

The primary object of the invention is to provide a combination clothes drier and duct cleaning brush.

Another object of the invention is to provide a combination brush where one end is designed to clean the lint trap of a standard clothes drier and the opposite side is designed to clean a standard clothes drier duct or air register or the like.

Another object of the invention is to provide a combination brush where the bristles do not loose stiffness when wet.

A further object of the invention is to provide a combination brush where the tips of the brush are protected so that internal surfaces of a clothes drier or duct are not damaged.

Other objects and advantages of the present invention will become apparent from the following descriptions, taken in connection with the accompanying drawings, wherein, by way of illustration and example, an embodiment of the present invention is disclosed.

In accordance with a preferred embodiment of the invention, there is disclosed a combination clothes dryer and duct cleaning brush comprising: a length of twisted strand of metal wire approximately fifty inches long, a plurality of first bristles radially emanating from one end of each end of said wire length, a plurality of second bristles radially emanating from the opposite end of said wire length, a first and second

protective cap fixedly attached to each end tip of said wire length, and a flexible plastic tube that encloses the central portion of said wire length and extends from the inside edge of said first set of bristles to the inside of said second set of bristles.

## Brief Description of the Drawings

The drawings constitute a part of this specification and include exemplary embodiments to the invention, which may be embodied in various forms. It is to be understood that in some instances various aspects of the invention may be shown exaggerated or enlarged to facilitate an understanding of the invention.

Figure 1 is a perspective view of the invention.

Figure 2 is a side section view of the invention.

## Detailed Description of the Preferred Embodiments

Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

Referring now to Figure 1 we see a perspective view of the invention 100. The cleaning brush of this invention has a cleaning head on each end. The first cleaning head 6 is conical in shape and is constructed of low burgomaster polyester S strand material and are rather densely packed when intertwined with a pair of metal wires during a standard brush construction procedure. The conical brush shape 6 is approximately eleven and one half inches long, one and one quarter of an inch at the widest diameter and three quarters of an inch in diameter at the smallest diameter. The S strand polyester bristles are an ideal choice for cleaning lint from a standard clothes dryer in that they will not damage the interior surfaces of the drier and maintain stiffness even when wet. The taper of the brush 6 allows the brush head 6 to more easily enter and traverse the interior of standard lint traps found in standard clothes driers. The relatively soft bristles made as described above tend to draw in and removably retain lint and hairs that standard lint traps miss so that the lint can be safely removed from internal areas of a standard clothes drier. The opposite side of the cleaning brush 100 includes a second brush head 2 that is designed for cleaning standard flexible ducts that are used to

provide an exit for moist air that is a result of drying activity in a standard clothes drier. These ducts tend to be four inches in diameter. Therefore the duct cleaning head 2 is comprised of a plurality of bristles that form a brush head approximately four inches in diameter and approximately two inches long. The length of the entire invention 100 is approximately fifty inches. This length was chosen so that the user can effectively clean far into standard drier ducts. Figure 2 shows a side section view of the present invention 100. This view shows the twisted wire pair 12 that is comprised of two strands of metal wire, each approximately one tenth of an inch in diameter. The combination of this wire diameter and the surrounding plastic tube 4 leads to the ideal flexibility to traverse non linear duct interiors, yet be stiff enough not to fold or kink during use. Each end of wire pair 12 is capped with a plastic enclosure 8, 10. The caps are made of a soft burgomaster plastic such as EVA and prevent the tips of the brush from damaging the interior of clothes driers or other items being cleaned by the brush 100. The duct cleaning head 2 is also ideal for cleaning the interior of heating registers and the like.

While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.